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Opportunities and challenges in Improving Access to Psychological Therapies for people with Severe Mental Illness (IAPT-SMI): evaluating the first operational year of the South London and Maudsley (SLaM) demonstration site for psychosis.

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Abstract (197 words)

Despite its demonstrated clinical and economic effectiveness, access to Cognitive Behavioural Therapy for psychosis (CBTp) in routine practice remains low. The UK National Health Service (NHS England) Improving Access to Psychological Therapies for people with Severe Mental Illness (IAPT-SMI) initiative aims to address this problem. We report 14-month outcomes for our psychosis demonstration site.

Primary and secondary care and self-referrals were screened to check the suitability of the service for the person. Psychotic symptoms, distress, service use, functioning and satisfaction were measured before and after therapy, by trained assessors. User-defined wellbeing and goal-attainment were rated sessionally.

Access to CBTp increased almost threefold (2011/12 accepted referrals/year n=106; 2012/13, n=300). The IAPT-SMI assessment protocol proved feasible and acceptable to service users, with paired primary outcomes for 97% of closed cases. Therapy completion (≥ 5 sessions) was high (83%) irrespective of ethnicity, age and gender. Preliminary pre-post outcomes showed clinical improvement and reduced service use, with medium/high effect sizes. User-rated satisfaction was high.

We conclude that individual psychological interventions for people with psychosis can be successfully delivered in routine services using an IAPT approach. High completion rates for paired outcomes demonstrate good user experience, clinical improvement, and potential future cost savings.

Keywords: schizophrenia; cognitive therapy; CBT; therapy outcome

Introduction

Psychosis is a mental health condition characterised by unusual experiences such as hearing voices that others cannot, or holding beliefs which others consider unusual. The experiences often cause significant distress and disability. Psychosis exacts a high societal cost (Andrew, Knapp, McCrone, Parsonage, & Trachtenberg, 2012), with increased risk of physical health problems, and early mortality (Chang et al., 2011). Medication is only partially effective: up to 40% of service users experience persistent distressing positive symptoms; over a third experience disabling concurrent affective disorders; and two thirds experience persisting negative symptoms of amotivation and apathy (National Institute for Health and Care Excellence, NICE, 2014). Suicide rates are up to twelve times greater compared to the general population (Dutta et al., 2010).

Cognitive therapy for psychosis (CBTp) is an adaptation of CBT for emotional disorders, tailored to the specific needs of people with psychosis. It draws on cognitive models of psychosis to identify and intervene with the psychological processes that are maintaining distress and impeding recovery, and to promote an individualised and helpful understanding of the experience of psychosis. Therapy is tailored to personal recovery goals, and exceptional care is taken to foster a therapeutic relationship that is genuinely collaborative, empowering, and characterised by explicit warmth, positive regard, and transparency (e.g. Johns, Jolley, Keen, & Peters, 2014).

There is robust evidence for the positive impact of CBTp on positive symptoms, distress and functioning compared to routine care. Improvement has been demonstrated in both formal research trials and routine services, with persistence of effects at follow-up and high service user satisfaction with therapy (e.g. NICE, 2014; Peters et al., 2010; Lincoln et al., 2012;

Morrison et al., 2004; Miles, Peters, & Kuipers, 2007). There is, however, a need to strengthen the evidence base for CBTp compared to an alternative therapy and effect sizes remain modest (Jauhar et al., 2014).

CBTp is cost-effective, resulting in net savings in healthcare costs of up to £2.3K, once the cost of providing therapy has been accounted for (NICE, 2014), arising primarily from reductions in the rate and duration of inpatient admissions. International clinical guidelines now recommend that people with psychosis are offered CBTp (Gaebel, Riesbeck, & Wobrock, 2011). In the UK, the updated NICE guidance recommends that people with psychosis are offered CBT at the earliest opportunity, prior to the onset of frank disorder, and at each recurrence of symptoms (NICE, 2014).

Despite the powerful evidence base, and high levels of consumer demand, psychological therapies are not readily accessible for people with psychosis, with reported delivery rates in routine services of 10% (The Schizophrenia Commission, 2012). Key limiting factors include unclear referral pathways; prioritisation of other interventions; and restricted therapist capacity with poor access to training, support and supervision within services (e.g. Shafran et al., 2009). The UK Improving Access to Psychological Therapies for people with Severe Mental Illness (IAPT-SMI) pilot initiative is designed to identify and overcome these obstacles, building on the success of IAPT services for people with anxiety and depression (Clark et al., 2009; Gyani, Shafran, Layard, & Clark, 2013), as part of the Department of Health's four-year plan to increase access to talking therapies (DH, 2011). There are six demonstration sites, offering NICE-recommended psychological therapies to people with bipolar affective disorder, personality disorders or psychosis. Here we report on the

implementation of CBTp in the first operational year (1/11/12 to 31/12/13) of the South London and Maudsley NHS Foundation Trust (SLaM) psychosis demonstration site.

Method

Service context

SLaM serves four London boroughs, each with high rates of diversity (50-60% Black and Minority Ethnic groups, Office for National Statistics, 2012), population movement, drug use, crime, socio-economic deprivation, and psychosis incidence. SLaM is part of the King's Health Partners Academic Health Sciences Centre, and services are provided within Clinical Academic Groups (CAGs), with the aim of developing specialist practice. The Psychosis CAG provides care for about 7,000 people with psychosis, at all stages of the condition, across four Care Pathways: Early Intervention (EI), Promoting Recovery (PR), Complex Care, and Acute Inpatient Care. The IAPT-SMI pilot is overseen by PICuP (Psychological Interventions Clinic for oUtpatients with Psychosis) in the EI and PR pathways, operating alongside existing psychological therapy provision and the multidisciplinary Community Mental Health Teams (CMHTs). The PR pathway serves people with established schizophrenia spectrum diagnoses, or with psychotic symptoms in the context of bipolar affective disorder. The EI pathway sees people with a first presentation of psychotic symptoms, which may reach the criteria for a range of diagnoses. Psychological therapists in routine services work sessionally in IAPT-SMI and, together with four NHS England funded therapists, the full therapist complement of the service is ten whole time equivalents (UK Agenda for Change bandings 7 and 8). All participants gave consent for their measures to be used pseudonymously, in aggregate, to evaluate the service, and the service evaluation was approved by SLaM's audit and evaluation committee (ref. PSYCHLO-13-18).

Referrals

The IAPT-SMI service is designed for service users with psychosis whose needs can be appropriately met within a psychological therapy service (i.e. people who are likely to opt-in to a sensitively offered talking intervention and attend reasonably reliably, and who do not currently present with very high levels of risk or chaotic behaviour). Referrals are accepted from primary and secondary care, with a self-referral option. Medical and social care needs are managed by the CMHT or in primary care during therapy.

Assessment

All referrals are screened by clinicians within the service to ensure referral criteria are met. Accepted referrals are contacted by an independent assessor (a graduate psychology assistant), trained in discussing therapy sensitively and in making assertive attempts to engage service users. People choosing to opt-in to the service are offered a pre-therapy assessment at a time and location to suit them. Assessments usually take place over a single session, and therapists offer a first therapy appointment as soon as possible following assessment. Independent assessments are repeated at three-months and at the end of therapy. Sessional measures are completed at every meeting, providing the service user agrees, with the therapist's help if needed.

Therapy

Therapy is offered flexibly to suit the person's needs, aiming for a minimum of 16 sessions in line with NICE guidance, and a maximum of 30 sessions. Sessions last approximately an hour, and are usually offered at weekly to fortnightly intervals, over six to nine months. Therapy is individualised and formulation based, but adheres to published manuals and the CORE CBTp competence framework (Roth & Pilling, 2013) in terms of central principles,

structure, and techniques employed. Location is flexible to suit the individual, but is usually in the referring team's base or a central clinic. Supervision is provided weekly to fortnightly in groups of 3-6 therapists for 1.5 hours, with fortnightly to monthly individual supervision. Supervisors are senior clinicians with between 10 and 20 years of experience of training therapists and of providing therapy within randomised controlled trials. Therapists are trained to competence, using evidence-based assessments of adherence and competence (Fowler, Rollinson, & French, 2011); training is usually 12-24 months of post-qualification, postgraduate study (Jolley et al., 2013).

Measures

One of the demonstration site aims was to pilot routine outcome monitoring, including activity (referrals, waiting times, attendance); performance (clinical and functioning outcomes and service use); user experience and satisfaction. The IAPT-SMI clinical outcomes battery comprised the four measures listed below, together with patient experience, satisfaction and feedback questionnaires, and the *Euroqol group's EQ5D (1990)* measure of Quality of Life, which will be reported in a separate economic analysis. We additionally report outcomes on the *Clinical Outcomes in Routine Evaluation-10 (CORE-10; Barkham et al., 2013)*, which generates a mean total distress score based on ten items, each rated from 0 to 4, ranging from 0 (low) to 40 (severe). Psychometrics are good, and changes of 5 points or more are considered reliable. Functional outcome was rated according to IAPT criteria as engaged in meaningful activity (in a work, domestic, voluntary or academic setting) or unoccupied. Demographic and service use data were collected by self-report and, for existing users of SLaM services, from the clinical record. Service use data collected during the first 14 months comprised the duration of mental health inpatient admissions (occupied bed days, OBDs) and the number of days in contact with a crisis team (crisis team days, CTDs),

calculated as a mean/person/month. Self-reported ethnicity was dichotomised into Black and Minority Ethnic (BME) or other group (non-BME). User experience was rated using six items on a five point scale from 1 (all of the time) to 5 (never), with a total score ranging from 6 (positive) to 30 (negative). Satisfaction was rated on a five point scale from 1 (very dissatisfied) through 3 (indifferent) to 5 (very satisfied). The Friends and Family Test (DH, 2013) rated likelihood of recommending the service, from 1 (extremely likely) to 5 (extremely unlikely). A pilot group of service users completed feedback specifically on the use of measures in the IAPT-SMI service, using a scale from 0 (extremely unhelpful) through 5 (neither helpful nor unhelpful) to 10 (extremely helpful).

IAPT-SMI clinical outcomes

1. Choice of outcome in cognitive therapy for psychoses (CHOICE; Greenwood et al., 2010; 2012)

An 11-item shortened version of this user-defined outcome measure is completed sessionally. Each item is rated from 0 (worst) to 10 (best), yielding a mean total score ranging from 0 to 10. Because of its high correlation with a range of measures of affective disturbance (Greenwood et al., 2010) and user-led design, the CHOICE was determined centrally and a priori as the primary outcome measure for the psychosis demonstration sites, and reliable improvement/deterioration similarly predetermined as a change of ≥ 1.45 in mean total score. The short version was developed specifically for the IAPT-SMI initiative, based on the highest loading items from the 34-item measure. Inter-rater, internal, and test-retest reliability for the new measure are all good, as is criterion validity (Greenwood et al., 2012).

2. Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS, Tennant et al., 2007)

Fourteen positively phrased items are rated from 1 (none of the time) to 5 (all of the time), yielding a total score ranging from 14 to 70. The authors report good internal consistency, test-retest reliability, content and criterion validity for mixed groups (Tennant et al., 2007). Sensitivity analyses suggest a change of three or more to represent meaningful clinical change (Maheswaran, Weich, Powell, & Stewart-Brown, 2012).

3. Work and Social Adjustment Scale (WSAS, Mundt, Marks, Shear, & Greist, 2002)

Five items rate functional impairment from 0 (low) to 8 (very severe) yielding a total score from 0-40. The authors report good psychometrics in a sample with affective disorders; with a score of 13 considered to represent reliable change.

4. Psychotic Symptom Rating Scales (PSYRATS - Haddock, McCarron, Tarrier, & Faragher, 1999).

This multidimensional structured interview measure of voices (11 items) and delusions (6 items) is completed only by individuals with a recent history of the relevant symptom (during the last month). Each item is rated for increasing severity from 0 to 4 over the last month. Psychometrics are very good, with perfect inter-rater reliability reported in the original development study (Haddock et al., 1999). Voices (0-44), delusions (0-24) and %PSYRATS $((\text{voices total}/44 + \text{delusions total}/24) \times 100)$ scores are reported.

Analyses

Descriptive statistics were calculated for all those attending an assessment. Total scores were prorated if two or fewer items were missing, and otherwise excluded, with sample size reported for each variable. Outcomes were reported for all closed cases from the start of the service on 1/11/12 to the reporting date of 31/12/13, comparing baseline to the most recent

assessment (last session, end or three-month assessments). Therapy dropout was defined *a priori* according to IAPT-SMI agreed criteria, as attending fewer than five sessions.

Demographic differences in completion rates and outcomes were investigated using both an eight category 'access group' variable (2x2x2; age >35 years/≤35 x BME/non-BME x gender) and BME status alone. Primary clinical outcome (CHOICE) and service use (OBDs, CTDs) data were collected for all cases; functioning, satisfaction and secondary clinical (CORE-10, WEMWBS, WSAS, PSYRATS) outcomes were collected for those attending a formal post-therapy assessment, and, for the PSYRATS only, those with a history of the relevant symptom. Paired-sample t-tests (McNemar test for the binary functional outcome variable) were used to assess the significance of change in outcomes (CHOICE mean score, service use (x2, OBDs, CTDs), functioning and the six secondary outcome measures) during the course of therapy and within-participant effect sizes (ES, Cohen's d) were calculated using the pooled standard deviation (i.e. using pre and post means combined) to minimise inflation of effects. Chi-squared tests (ES: Cramer's V), t-tests (using a Satterthwaite adjustment when the assumption of equality of variance was violated) and ANOVA (ES: Cohen's d) were used to investigate variation in outcomes according to therapy completion/dropout (for CHOICE (mean score, reliable change) and service use only), current psychotic symptoms, access group, and BME status.

Results

Referrals and therapy completion

Of all referrals for CBTp (n=367), the service was considered unsuitable for only 13% of cases (n=49). Reasons for referrals not being accepted were: i) no psychosis presentation (either current or historical, n=22); ii) needs indicate priority involvement of a CMHT, or other service not currently being provided (e.g. high risk, acutely unwell, n=14); iii) person

offered therapy outside IAPT-SMI, therefore referral no longer relevant (n=9); iv) out of catchment area (n=2); vi) other (n=2). At the time of reporting, 84% of accepted referrals had opted-in (been contacted and agreed to an assessment for therapy). Of those opting in, 88% had completed an assessment. The time from referral to opt-in was 31 (SD=26) days, and from opt-in to assessment, 11 (SD=8) days. Referrals and attrition are illustrated in the service consort diagram in Figure 1. Demographic and clinical characteristics of those attending for an assessment are shown in Table 1. Therapy had been offered to 81% of people assessed with 65 closed cases: 54 (83%) completed therapy; 11 (17%) dropped out of therapy (received <5 sessions). For closed cases, the time from assessment to therapy was 39 (SD=36) days. Completers received an average of 15.6 sessions (SD=7.4) over 5.8 months (SD=2.4). Those dropping out received 2.8 (SD=1.1) sessions over 2.2 (SD=1.3) months.

Figure 1 and Table 1 here

Primary clinical outcome (CHOICE)

Paired completion rates for the CHOICE were 97% (n=63). Therapy completers improved during therapy, showing greater and more reliable improvement than dropouts, with higher final session scores ($t=2.8$, $df=61$, $p=.006$; Table 2). Two therapy completers showed reliable deterioration on the CHOICE (mean score reduced by ≥ 1.45): one reported high satisfaction, with unreliable improvement on the WEMWBS (mean score increased by <3), and unreliable deterioration on the CORE (mean score reduced by <5) and WSAS (mean score reduced by <13); one reported dissatisfaction, but showed meaningful improvement on the WEMWBS, and unreliable improvement on the CORE and WSAS. Neither showed any change in service use, functioning or PSYRATS scores.

Table 2 here

Service use

Paired service use data were available for all participants. Average use/person/month in the year preceding therapy was 0.9 OBDs (SD=2.2) and 0.2 CTDs (SD=0.6). A quarter (24.6%) of closed cases had an admission and/or crisis team contact. Service use during therapy reduced to zero, with no difference for therapy completers compared to therapy dropouts (OBDs: unequal variances $t=1.4$, $df=11.7$, $p=.2$; CTDs: $t=0.8$, $df=63$, $p=.4$). Pre-post effect sizes were medium ($n=65$; OBDs: mean change=0.9, pooled SD=1.6, ES(d)=0.6; CTDs: mean change=0.2, Pooled SD=0.4, ES(d)=0.5).

Functioning outcomes

These were collected post-therapy for 61% of closed cases ($n=40$), all therapy completers (representing 74% (40/54) of those completing therapy). At the start of therapy, 35% of completers were engaged in meaningful activity. By the end of therapy, 48% were engaged in meaningful activity. Improvement (from unoccupied to meaningful activity) was reported by 23% ($n=9$), no change for 67% ($n=27$), and a reduction in activity (from meaningful to unoccupied) for 10% ($n=4$). The change in scores did not reach significance (related samples McNemar test, $p=.3$).

Satisfaction ratings

These were completed by 61% of closed cases ($n=40$), again all therapy completers (Table 3). Mean total user experience score was 8.2 (SD=2.8, range 6 (highest possible) to 17). The pilot feedback group ($n=29$) rated the measures overall as helpful (Mean=6.9, SD=1.7), with only one 'unhelpful' (4) rating.

Table 3 here

Secondary clinical outcomes

Nearly 70% of closed cases (n=45) completed secondary clinical outcomes, all therapy completers (representing 83% of completers; Table 4). Just under half of closed cases reported recent psychotic symptoms (46%; n=30); 24 of these completed therapy; five therapy completers with psychotic symptoms did not complete secondary measures (21%). Therapy completion ($\chi^2=0.4$, df=1; p=.7), outcomes (F values <2.5; χ^2 values <5.0; p values >.1) and satisfaction (t<0.5, df=37; χ^2 values <3.5; p values >.3) did not differ according to psychotic symptom status.

Table 4 here

Access group and BME status

Completion and dropout rates did not differ by access group ($\chi^2=4.8$, df=7, p=.7) or BME status ($\chi^2=0.1$, df=1, p=.7). No outcome measure (CHOICE, service use, functioning, or secondary clinical outcomes) differed, at baseline, or in change from pre to post, according to access group or BME status (F values <4.1, p values >.05), nor did reliable improvement (χ^2 values <33, p values >.5). Experience and satisfaction ratings differed only on one item (understanding and addressing difficulties), with greater satisfaction for young BME men compared to older non-BME men and older BME women (F(7,32)=2.6, p=.03) and for BME service users overall (F(1,38)=8.2, p=.007; otherwise F values <3, p values >.1).

Discussion

Our aim was to demonstrate increased delivery of high quality, evidence-based, clinically and cost-effective, NICE- recommended, individual cognitive behavioural interventions for people with psychosis, in a routine secondary care setting, using a systematic, IAPT approach, with routine measurement of outcomes.

We were able to use additional, ring-fenced funding to increase access almost threefold, and to increase delivery at a rate of approximately 20 cases/whole time equivalent therapist/year. The IAPT approach was feasible and acceptable to service users, with good satisfaction and experience ratings. High primary outcome paired completion rates (97%) provide some confidence in concluding that outcomes compare favourably to those reported for IAPT services for people with Common Mental Illnesses, with medium to large pre-post effect sizes across measures (e.g. Gyani et al., 2013; Clark et al., 2009). Pre-post change in secondary measures was comparable to other routine care studies (e.g. Peters et al., 2010; Morrison et al., 2004). Reductions in service use during therapy, consistent with previous findings, suggest cost-effectiveness. We have, therefore, demonstrated the potential for successful translation of the positive clinical and economic effects of therapy achieved in randomised controlled trials to routine services. Importantly, we demonstrated access to a group with rates of ethnic variation similar to those of our culturally diverse catchment areas, and found no demographic inequity in retention in therapy or in outcome.

We consider three main factors to have facilitated increased access. Firstly, we were organisationally ready, with a history of strong clinical leadership in this area. Service pathways were established; equity of access, referral rates and outcomes were centrally monitored; and managerial support for specialised psychosis work, including the availability of expert training and supervision, had resulted in a critical mass of staff equipped to deliver

interventions to a high standard. Our readiness meant that ring-fenced funding, the second key facilitator, could be translated almost immediately into increased delivery, and that the creation of secondary care posts dedicated solely to delivering NICE-recommended psychological interventions for people with psychosis was feasible. Therapist time was thus protected from the competing demands of crisis management and social care work in the CMHT, whilst preserving close working links. Finally, the specialised nature of the service meant that all staff, from assessors to supervisors, were knowledgeable about the difficulties facing people with psychosis, and how to accommodate these: for example, the need for persistent, yet flexible and sensitive efforts to engage; the use of reminders and prompts to promote attendance; and resilience to unpredictable attendance and engagement.

We employed assistant psychologists to carry out therapy assessments, which reduced the burden on therapists, and the potential for completion of outcome measures to be deprioritised by therapists in the face of other clinical concerns. The independent assessment also acted as a useful triage system, reducing the amount of therapist time spent chasing referrals who eventually opted out of therapy. Attendance at post-therapy assessment sessions was good for completers (83%), but just under 70% for all closed cases, underlining the importance of reliable sessional measurement in achieving a high rate of paired outcomes. Service user feedback about the completion of outcome measures was generally positive; disseminating this information within our own service facilitated therapists overcoming their own reservations about outcome measurement.

Limitations

The primary limitations of the evaluation are its service-specificity, and the uncontrolled design. Referrals were accepted on the basis of the service being suitable to meet their needs;

not to represent a wider group, and the relatively small number of closed cases at this stage may limit the representativeness of the caseload even within the local context. The catchment area is urban, and some recommendations may be less applicable outside the inner city. Assessments were not blind, which may inflate effects, and the primary outcome measure is novel. Reported effects are pre-post and within-participant, with no control group. We cannot, therefore, infer with any certainty that any changes in presentation occur as a result of therapy; nor can effects be compared directly with between-group single study and meta-analytic effect sizes. Comparison between therapy completers and those who disengaged may be limited by additional difficulties of the disengaging group, unmeasured by our assessments. Bonferroni correction for multiple testing (four between-group; ten within-participant tests of outcome) rendered two findings no longer significant; post-hoc calculations suggest that this may reflect lack of power (CHOICE improvement: $n=63$, adjusted $\alpha=.01$, $df=5$; 80% power to detect χ^2 values >15 ; PSYRATS-D: $n=14$; adjusted $\alpha=.005$; 80% power to detect pre-post ES >1). The between-group analyses of equity of access only had sufficient power to detect large effects, and the null findings should therefore be interpreted with caution, pending replication in larger samples.

Implications

The challenge of IAPT-SMI is to replicate at scale, in routine services, the effectiveness achieved under carefully controlled conditions in research trials by expert therapists, and to demonstrate both what has been delivered, and its impact. This is a difficult task: routine services are not research trials; there are no clear inclusion criteria, service users present with complex, diagnostically indeterminate problems and staff work pragmatically and eclectically, using an admixture of published evidence, experience, and case by case science in practice. Nevertheless, our pilot has demonstrated that an IAPT-SMI approach, whereby

psychological therapies are prioritised and systematically evaluated, can operate effectively within routine secondary services for people with psychosis, and can reliably evidence good outcomes. The implication for wider implementation is that increased access need not depend on a whole service transformation: our experience shows that once appropriate referral pathways and expert supervision/support structures are established, the recruitment of well trained therapists and assessors with ring-fenced time will result in increased, well evaluated, cost-effective delivery.

Conclusions

Outcomes from the first operational year of the SLam IAPT-SMI demonstration site show that evidence-based, NICE-recommended individual psychological therapy interventions can be successfully delivered in routine services, with high paired completion rates and preliminary evidence for the translation of good clinical and economic outcomes. Primary facilitators were ring-fenced investment in competent therapy provision, adequate supervision, and trained assessors, in the context of established service pathways and governance structures, supported by strong clinical leadership and management. The framework delineated is potentially replicable to inform wider implementation and the delivery, at scale, of cost-effective individual interventions to improve recovery outcomes for people with psychosis.

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Figure 1: Consort diagram showing referrals and retention over 14 months

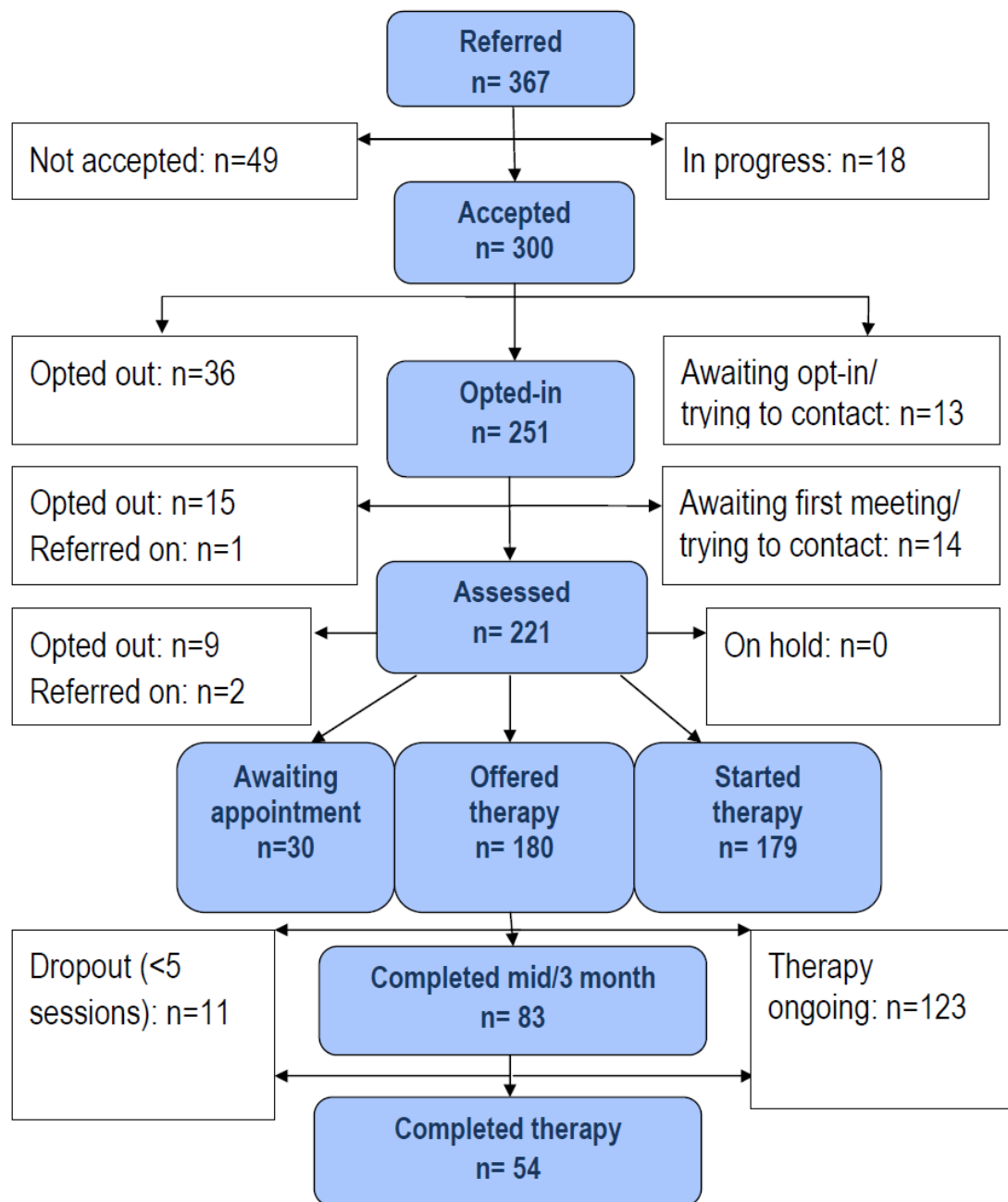


Table 1: Demographic and clinical characteristics of referrals

Variable			All (n=221)
Mean age in years (SD, range)			37.9 (11.4, 18-70)
Pathway			
Early Intervention			53 (24%)
Promoting Recovery			168 (76%)
Gender			
Male			111 (50%)
Female			110 (50%)
Ethnic group ¹			
Black/Minority Ethnic (BME)			127 (58%)
Non-BME			93 (42%)
Access group ¹			
Age ≤ 35 years	Male	BME	36 (16%)
		non-BME	22 (10%)
	Female	BME	25 (11%)
		non-BME	13 (6%)
Age > 35 years	Male	BME	23 (10%)
		non-BME	30 (14%)
	Female	BME	43 (19%)
		non-BME	28 (13%)
Diagnosis			
Schizophrenia spectrum (ICD F20-29)			138 (62%)
Bipolar (ICD F30/31)			18 (8%)
Psychotic depression			26 (12%)
Other			39 (18%)

Key: ¹One person preferred not to state their ethnicity; ICD: International Classification of Disease (World Health Organisation, 1992).

Table 2: Primary clinical outcomes by therapy completion

	Therapy complete (n=53 ¹)		Therapy dropout (n=10 ¹)	
	Mean (SD)			
	Pre	Post	Pre	Post
CHOICE	4.8 (2.4)	6.4 (2.3)	4.6 (2.0)	4.2 (2.3)
<i>Pooled SD</i>	2.4		2.1	
<i>Pre-post t-test</i>	t=5.6, df=52, p<.001		t=0.9, df=9, p=.4	
<i>Change, ES</i>	1.6 (2.0); ES:d=0.7(medium)		0.4 (1.5); ES:d=0.2(small)	
<i>Pooled SD</i>	2.1			
<i>Between group t-test, ES</i>	t=2.9, df=61, p=0.005, ES: d=0.6 (medium)			
	n (%)			
Any improvement	41 (77%)		4 (40%)	
<i>Reliable Improvement</i> ²	29 (55%)		1 (10%)	
No change	2 (4%)		0	
Any deterioration	10 (19%)		6 (60%)	
<i>Reliable Deterioration</i> ²	2 (4%)		2 (20%)	
<i>Between group χ^2 test, ES</i>	$\chi^2=11.4$, df=5, p=.04 ³ , ES: Cramer's V=0.4 (large)			

Key: ¹n=1 did not complete a CHOICE in each group; ²a change in mean score of 1.45 or more on the CHOICE; ³no longer significant following Bonferroni correction; ES=Effect Size; SD=Standard deviation

Table 3: Satisfaction ratings

Patient Experience Questionnaire and Satisfaction rating % responses (n=40)

<i>Patient Experience</i>	<i>At all times</i>	<i>Most of the time</i>	<i>Sometimes</i>	<i>Rarely/Never</i>
<i>1. Did staff listen to you and treat your concerns seriously?</i>	85	15	0	0
<i>2. Do you feel that the service has helped you to better understand and address your difficulties?</i>	63	28	8	3
<i>3. Did you feel involved in making choices about your treatment and care?</i>	60	30	10	0
<i>4. Were you satisfied with the time you waited for your first and subsequent appointments?¹</i>	72	21	8	0
<i>5. On reflection, did you get the help that mattered to you?</i>	58	33	5	5
<i>6. Did you have confidence in your therapist and his/her skills and techniques?</i>	85	13	3	0
<i>Satisfaction²</i>	<i>Very satisfied</i>	<i>Satisfied</i>	<i>Indifferent</i>	<i>Dissatisfied</i>
<i>How satisfied are you with therapy?</i>	51	39	2	7

Friends and Family Test (FFT) % responses (n=30)³

How likely are you to recommend our service to friends and family if they needed similar care or treatment?

<i>Extremely likely</i>	<i>Likely</i>	<i>Neither likely nor unlikely</i>	<i>Unlikely</i>	<i>Extremely unlikely</i>	<i>Don't know</i>
83	17	0	0	0	0

Key:¹n=39; ²n=41; ³FFT score for this service=83, based on 30 responses

Table 4: Secondary clinical outcomes

<i>Measure</i>	n	Mean (SD)		Pre-post change		
		Pre- therapy	Post- therapy	Change (SD, pooled)	Paired t-test	ES (d)
<i>CORE-10</i>	45	16.0 (8.9)	10.8 (7.1)	5.2 (8.4)	t=6.1, df=44, p<.001	0.6
<i>WEMWBS</i>	45	42.2 (12.9)	50.4 (9.7)	8.2 (12.0)	t=6.0, df=44, p<.001	0.7
<i>WSAS</i>	45	16.6 (9.8)	12.8 (10.3)	4.2 (10.2)	t=3.0, df=44, p=.004	0.4
<i>PSYRATS-V</i>	13 ¹	23.1 (8.6)	16.6 (10.9)	6.5 (10.1)	t=1.7, df=12, p=.1	0.6
<i>PSYRATS-D</i>	14 ¹	15.6 (3.6)	11.5 (6.3)	4.1 (5.4)	t=2.8, df=13, p=.02 ²	0.8
<i>PSYRATS- combined %</i>	19 ¹	59.7 (12.1)	41.4 (23.4)	18.3 (20.6)	t=3.8, df=18, p=.001	0.9

Key: CORE-10: Clinical Outcomes in Routine Evaluation (10 item) Barkham et al., 2013; WEMWBS: Warwick Edinburgh Mental Wellbeing Scale (Tennant et al., 2007); WSAS: Work and Social Adjustment Scale (Mundt et al., 2002); PSYRATS: Psychotic Symptoms Rating Scale (Haddock et al., 1999); V: Voices; D: Delusions; ES=Effect Size; SD=Standard deviation; ¹includes n=8 experiencing both voices and delusions; ²no longer significant following Bonferroni correction.